

Work Order ID 91442

October-10-12 12:59:33 PM

91442

Page 1

Item ID: D4542-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Stop ***NS2***

Item Name: Retainer, Inner, lh

Start Date: 10/10/2012 Start Qty: 15.00 ***15***

Cust Item ID:

Required Date: 09/11/2012 Req'd Qty: 15.00 ***15***

Customer:

Reference:

Approvals: Process Plan: MLJ Date: 12-10-10 Tooling: _____ Date: _____
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Run Start ***NR1***

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
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Draw Nbr	Revision Nbr
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D4542	C
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100

0.00

100

Waterjet

Memo

0.00

FLOW CNC Waterjet

6061.032

1- Cut as per dwg

Prog rev: C

Dwg rev: C

2- Deburr

15 0 Jm 12-10-18

110

QC2- Inspect parts off machine FAI/FAIB

0.00

110

QC

Memo

0.00

Quality Control

15 0 Jm 12-10-18

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>					
Root Cause	Date	Step	Qty	Description of work order update or Non-conformance	Initial Chief Eng	Action Description	Sign & Date	Verification	QC Inspector		
Doc/Data <input type="checkbox"/>											
Equip/Tooling <input type="checkbox"/>											
Operator <input type="checkbox"/>											
Material <input type="checkbox"/>											
Setup <input type="checkbox"/>											
Other <input type="checkbox"/>											
Process <input type="checkbox"/>											
Supplier <input type="checkbox"/>											
Training <input type="checkbox"/>											
Unapproved <input type="checkbox"/>											
FAULT CATEGORY											
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other		

Work Order ID 91442

October-10-12 12:59:33 PM

91442

Page 2

Item ID: D4542-1

Accept

N900040100

Setup Start ***NS1***

Revision ID:

Item Name: Retainer, Inner, lh

Stop ***NS2***

Start Date: 10/10/2012 Start Qty: 15.00

15

Cust Item ID:

Required Date: 09/11/2012 Req'd Qty: 15.00

15

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start ***NR1***

QC:

Date:

SPC (Y/N):

Date:

Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 *120* QC Quality Control	QC8- Inspect parts - second check Memo	0.00 0.00		Smb 12.10.18		15			
130 *130* Packaging Packaging	Identify as per dwg & Stock Location: <u>15</u> Memo	0.00 0.00				15			Sb 12/11/15
140 *140* QC Quality Control	QC21- Final Inspection - Work Order Release Memo	0.00 0.00							12/11/19 JF MF 12-11-15

NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
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Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
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Setup <input type="checkbox"/>												
Other <input type="checkbox"/>												
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FAULT CATEGORY												
Landing Gear <input type="checkbox"/> Bending <input type="checkbox"/> Centre Not Concentric to O/S <input type="checkbox"/> Cracks <input type="checkbox"/> Crushed/Crimped. <input type="checkbox"/> Cuffs <input type="checkbox"/> Heat Treat <input type="checkbox"/> Inspection Strip in Tube <input type="checkbox"/> Ripples in Bend <input type="checkbox"/> Torque Waves in Extrusion <input type="checkbox"/> Turning Sequence <input type="checkbox"/> Wave/Twist in Tube			General <input type="checkbox"/> Bend <input type="checkbox"/> BOM/Route <input type="checkbox"/> Broken/Damaged <input type="checkbox"/> Burrs <input type="checkbox"/> Contamination <input type="checkbox"/> Countersink <input type="checkbox"/> Cut Too Short <input type="checkbox"/> Drill Holes <input type="checkbox"/> Drawing <input type="checkbox"/> Finish <input type="checkbox"/> Folio			<input type="checkbox"/> Grain <input type="checkbox"/> Hardware <input type="checkbox"/> Inspection Incomplete <input type="checkbox"/> Instructions Incomplete/Unclear <input type="checkbox"/> Maintenance <input type="checkbox"/> Mislabeled <input type="checkbox"/> Misread <input type="checkbox"/> Offset <input type="checkbox"/> Out of Calibration <input type="checkbox"/> Out of Sequence <input type="checkbox"/> Outside Dimensions			<input type="checkbox"/> Ovalized <input type="checkbox"/> Over/Under tolerance <input type="checkbox"/> Part Incorrect <input type="checkbox"/> Part Lost/Missing <input type="checkbox"/> Part Moved <input type="checkbox"/> Positioned Wrong <input type="checkbox"/> Power Loss/Surge <hr/> <hr/> <hr/>		<input type="checkbox"/> Pressure/Forced <input type="checkbox"/> Temperature/Cure <input type="checkbox"/> Weld <input type="checkbox"/> Wrong Stock Pulled <input type="checkbox"/> Other	

Picklist Print

October-10-12 12:59:36 PM

Page 1

Work Order ID: 91442

91442

Parent Item: D4542-1

D4542-1

Parent Item Name: Retainer, Inner, lh

Start Date: 10/10/2012

Required Date: 09/11/2012

Start Qty: 15.00

Required Qty: 15.00

Comments: IPP revA 12.01.04 New Issue EC verified by:DD
REV:B 12.02.24 as per dwg reva DD verf:EC
12.05.08 as per dwg revB DD verf:EC
IPP REV:C

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
---------------------------------	------------------------	---------------	-------------	---------------------	------------------	-----------------	--------------------	----------------	-------------	--------------	---------------	----------------	--------

M6061T6S.032		Purchased	No			100	sf	700.0600	0.833	12.15263			
--------------	--	-----------	----	--	--	-----	----	----------	-------	----------	--	--	--

M6061T6S 032

6061-T6 Sheet 0.032"

** 13.2

Jm 12-10-18

Location	Loc Qty	Loc Code
----------	---------	----------

MAT021	700.06	
121099	85.97	
122256	40.89	
122737	30.1	
123097	91.1	
123135	96	
123137	356	

123293

123293

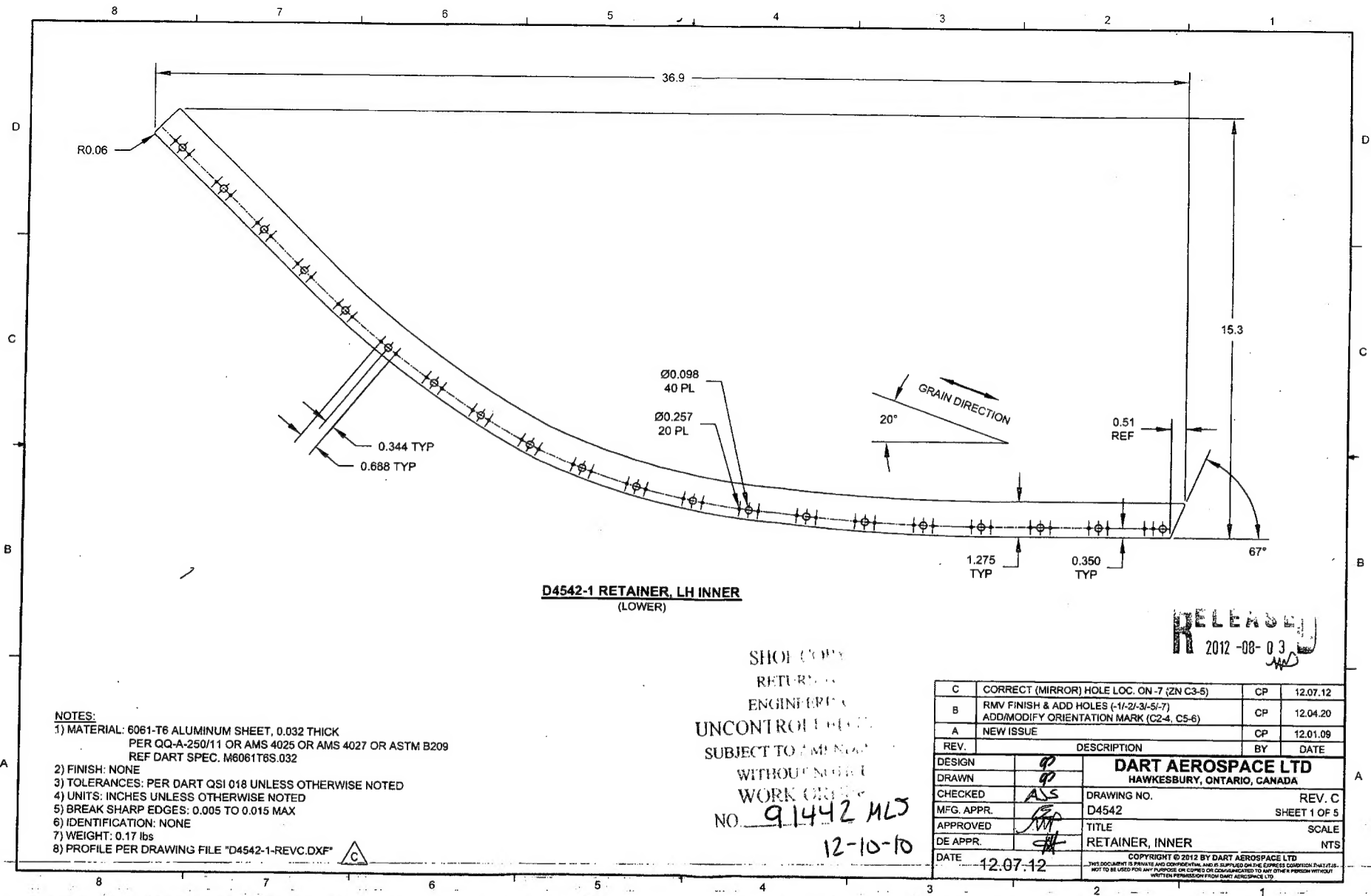
NCR: Yes / No

WORK ORDER NON-CONFORMANCE / UPDATE

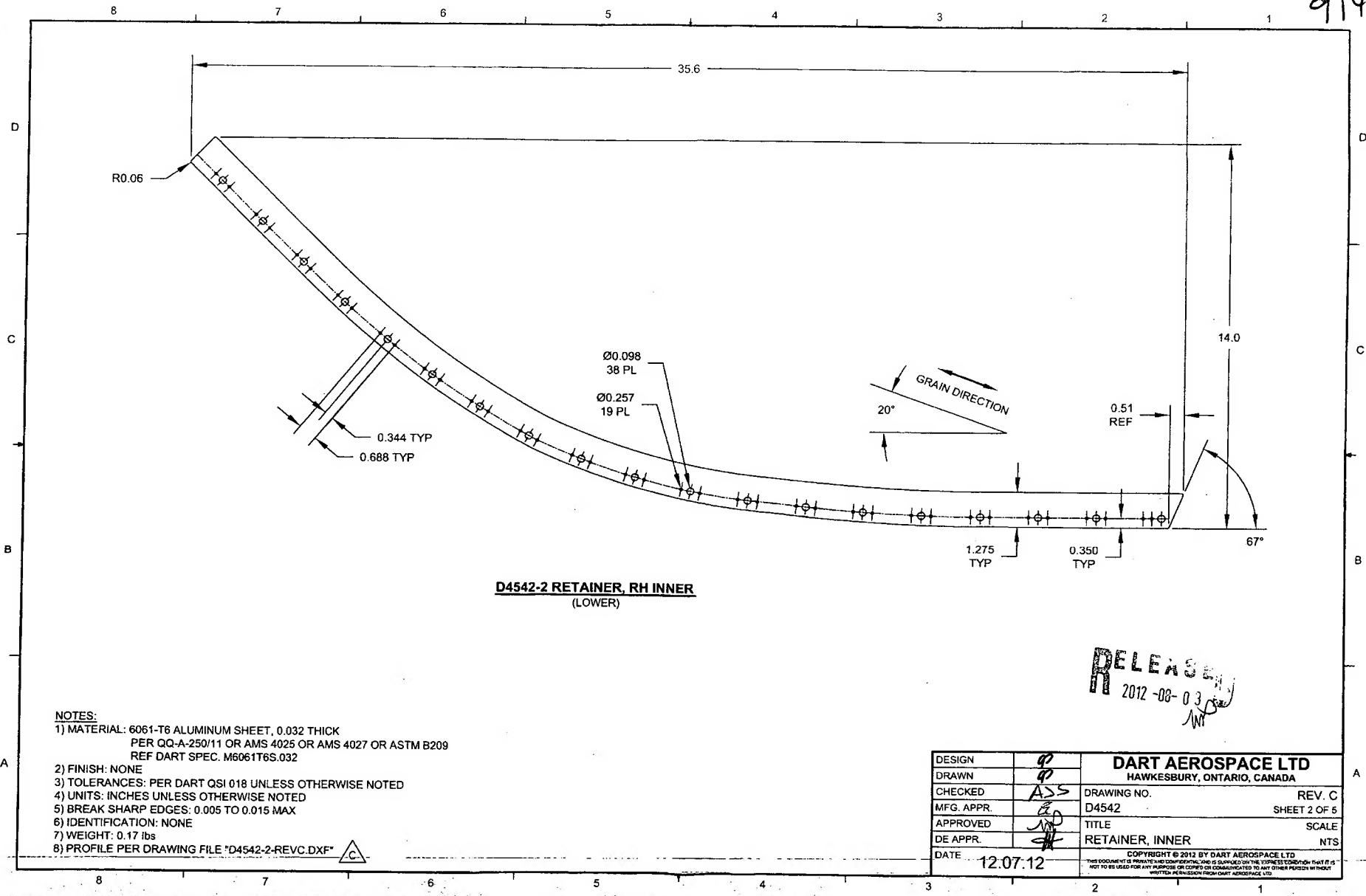
DQA: _____ Date: _____

QA Closed: _____ Date: _____

Work Order: _____ Part No. _____ NCR No. _____				DISPOSITION Rework <input type="checkbox"/> Scrap <input type="checkbox"/> Use-as-is <input type="checkbox"/> Work Order Update <input type="checkbox"/>		AGAINST DEPARTMENT/PROCESS <div style="display: flex; justify-content: space-between;"> <div> Skid-tube <input type="checkbox"/> Machining <input type="checkbox"/> Thermoforming <input type="checkbox"/> Large Fab <input type="checkbox"/> </div> <div> Crosstube <input type="checkbox"/> Small Fab <input type="checkbox"/> Finishing <input type="checkbox"/> Composite <input type="checkbox"/> </div> <div> Water Jet <input type="checkbox"/> Prod. Eng. Coord. <input type="checkbox"/> Rec/Store/Packaging <input type="checkbox"/> Supplier <input type="checkbox"/> </div> <div> Engineering <input type="checkbox"/> Quality <input type="checkbox"/> Other <input type="checkbox"/> </div> </div>						
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Doc/Data <input type="checkbox"/>												
Equip/Tooling <input type="checkbox"/>												
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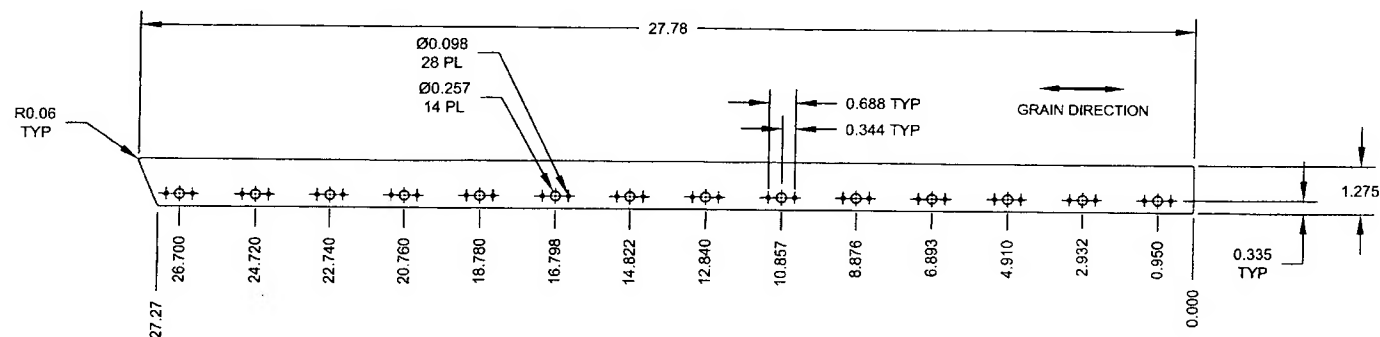


91442



DESIGN	<i>DP</i>	DART AEROSPACE LTD	
DRAWN	<i>DP</i>	HAWKESBURY, ONTARIO, CANADA	
CHECKED	<i>ASS</i>	DRAWING NO.	REV. C
MFG. APPR.	<i>ED</i>	D4542	SHEET 2 OF 5
APPROVED	<i>MD</i>	TITLE	SCALE
DE APPR.	<i>MD</i>	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD	
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91442



D4542-3 RETAINER, INNER
(SIDE)

RELEASED
2012-03-03

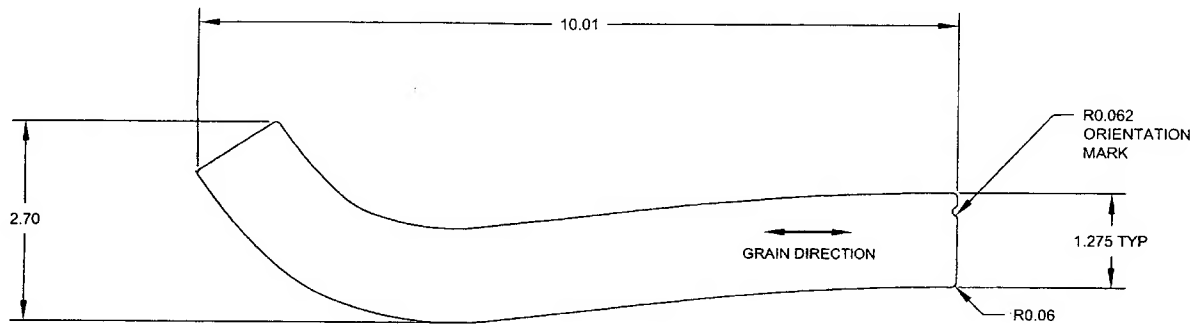
NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.11 lbs
- 8) PROFILE PER DRAWING FILE "D4542-3-REV.C.DXF"



DESIGN	DP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DP		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	ES	D4542	SHEET 3 OF 5
APPROVED	WJ	TITLE	SCALE
DE APPR.	WJ	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR DISCLOSED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

91442



D4542-5 RETAINER, INNER
(TOP CORNER)

RELEASED
2012-08-03

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: CHEMICAL CONVERSION COAT PER DART QSI 005 4.1
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.04 lbs
- 8) PROFILE PER DRAWING FILE "D4542-5-REVC.DXF"



DESIGN	DP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	DP		
CHECKED	ASS	DRAWING NO.	REV. C
MFG. APPR.	E	D4542	SHEET 4 OF 5
APPROVED	W	TITLE	SCALE
DE APPR.	W	RETAINER, INNER	NTS
DATE	12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD. <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

Technical drawing of a shaft cross-section. The drawing shows a horizontal shaft with various dimensions and features. Key dimensions include:

- Overall length: 16.34
- Distance from left end to centerline: 1.74
- Distance from centerline to right end: 1.275 TYP
- Distance from left end to first hole: 0.098 (28 PL)
- Distance from first hole to second hole: 0.257 (14 PL)
- Distance from centerline to right end of hole pattern: 7.1 TO TANGENT REF
- Distance from centerline to right end of hole pattern: 0.350 TYP
- Distance from centerline to right end of hole pattern: 0.344 TYP
- Distance from centerline to right end of hole pattern: 0.688 TYP
- Distance from centerline to right end of hole pattern: R0.062 ORIENTATION MARK
- Distance from centerline to right end of hole pattern: R0.06 TYP

 The drawing also indicates the GRAIN DIRECTION and includes a note about the TANGENT REF.

D4542-7 RETAINER, INNER
(TOP)

NOTES:

- 1) MATERIAL: 6061-T6 ALUMINUM SHEET, 0.032 THICK
PER QQ-A-250/11 OR AMS 4025 OR AMS 4027 OR ASTM B209
REF DART SPEC. M6061T6S.032
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.015 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.07 lbs
- 8) PROFILE PER DRAWING FILE "D4542-7-REV.C.DXF"

RELEASE
2012-08-03

DESIGN	90	DART AEROSPACE LTD	
DRAWN	90	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AJS	DRAWING NO.	REV. C
MFG APPR.	EW	D4542	SHEET 5 OF 5
APPROVED	EW	TITLE	SCALE
DE APPR.	EW	RETAINER, INNER	NTS
DATE	-12.07.12	COPYRIGHT © 2012 BY DART AEROSPACE LTD THIS DOCUMENT IS THE PROPERTY OF DART AEROSPACE LTD. IT IS NOT TO BE COPIED OR REPRODUCED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT THE WRITTEN PERMISSION OF DART AEROSPACE LTD.	